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Life traits of *Aedes mosquitoes* as factors of arboviruses emergence

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Life traits of Aedes mosquitoes as factors of arboviruses emergence Among the >3500 mosquito species described in the world, only a few hundred are able to transmit arbovirus to human. For example, as less than 10 among 920 Aedes species effectively transmit dengue and Chikungunya viruses naturally. Based on recent field and experimental results particularly on Aedes albopictus, we will show the role and relative contribution of the different parameters of vector competence and vector capacity in shaping Aedes-arbovirus interactions and the resulting pathogen transmission dynamics and risk of emergence. These include mosquito life history traits and biology parameters such as population dynamics, longevity, trophic behavior, habitat preference, diapause, genetics, immunity and biotic interactions. The mechanisms and processes underlying the patterns observed in the field should be studied all the way, from molecules to individuals and populations, towards a better understanding of what makes a mosquito vector and how best to control it.

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